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PRELIMINARY REPORT
INDUSTRY SERIES

1987 Census of Manufactures

MC87-I-28D(P)
Issued June 1989

SOAP, CLEANERS, AND TOILET GOODS

Industries 2841, 2842, 2843, and 2844

INTRODUCTION

This report presents preliminary statistics from the 1987 Census of Manufactures for those establishments classified in the industries listed above. These data will be superseded by a more comprehensive final paperbound report. The method of data collection and use of administrative data are discussed in detail in the appendix.

All dollar figures included in this report are at prices current for the year specified and, therefore, unadjusted for changes in price levels. Consequently, when making comparisons to prior years, users should take into consideration the inflation that has occurred.

The definitions of these industries are the same as those used in the 1987 Standard Industrial Classification (SIC) Manual.[1]

INDUSTRY 2841, SOAP AND OTHER DETERGENTS

In the 1987 Census of Manufactures, Industry 2841, Soap and Other Detergents, had employment of 31.4 thousand. The employment figure was 11 percent below the 35.4 thousand reported in 1982. Compared with 1986, employment in 1987 decreased 3 percent. The 1986 data are based on the Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

The total value of shipments for establishments classified in this industry was $11.5 billion.

In 1987, establishments in this industry accounted for 91 percent of products considered primary to the industry regardless of the industry in which they were produced (coverage ratio). In 1982, the coverage ratio was 91 also. The products primary to this industry appear in table 2 and aggregated to $9.6 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to $5.6 billion in 1987. Data on specific materials consumed appear in table 3.

INDUSTRY 2842, POLISHES AND SANITATION GOODS

In the 1987 Census of Manufactures, Industry 2842, Polishes and Sanitation Goods, had employment of 20.3 thousand. The employment figure was 12 percent below the 23.0 thousand reported in 1982. Compared with 1986, employment in 1987 decreased 4 percent. The 1986 data are based on the Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

The total value of shipments for establishments classified in this industry was $5.5 billion.

In 1987, establishments in this industry accounted for 76 percent of products considered primary to the industry regardless of the industry in which they were produced (coverage ratio). In 1982, the coverage ratio was 78. The products primary to this industry appear in table 2 and aggregated to $5.1 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to $1.9 billion in 1987. Data on specific materials consumed appear in table 3.

INDUSTRY 2843, SURFACE ACTIVE AGENTS

In the 1987 Census of Manufactures, Industry 2843, Surface Active Agents, had employment of 8.9 thousand.

[1] **Standard Industrial Classification Manual: 1987.** For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 041-001-00314-2.

Address inquiries to Bureau of the Census, Industry Division, Washington, DC 20233, or call **Andrew W. Hait** (301) 763-2510.

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The employment figure was 5 percent above the 8.5 thousand reported in 1982. Compared with 1986, employment in 1987 decreased 6 percent. The 1986 data are based on the Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

The total value of shipments for establishments classified in this industry was $3.0 billion.

In 1987, establishments in this industry accounted for 75 percent of products considered primary to the industry regardless of the industry in which they were produced (coverage ratio). In 1982, the coverage ratio was 65. The products primary to this industry appear in table 2 and aggregated to $2.8 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to $1.7 billion in 1987. Data on specific materials consumed appear in table 3.

INDUSTRY 2844, TOILET PREPARATIONS

In the 1987 Census of Manufactures, Industry 2844, Toilet Preparations, had employment of 58.4 thousand. The employment figure was 3 percent below the 60.4 thousand reported in 1982. Compared with 1986, employment in 1987 decreased 1 percent. The 1986 data are based on the Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

The total value of shipments for establishments classified in this industry was $14.4 billion.

In 1987, establishments in this industry accounted for 87 percent of products considered primary to the industry regardless of the industry in which they were produced (coverage ratio). In 1982, the coverage ratio was 89. The products primary to this industry appear in table 2 and aggregated to $14.7 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to $3.9 billion in 1987. Data on specific materials consumed appear in table 3.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used in the tables in this publication:

-	Represents zero.
(D)	Withheld to avoid disclosing data for individual companies; data are included in higher level totals.
(NA)	Not available.
(NC)	Not comparable.
(S)	Withheld because estimate did not meet publication standards on the basis of either the response rate or a consistency review.
(X)	Not applicable.
(Z)	Less than half the unit shown.
do	Ditto.
n.e.c.	Not elsewhere classified.
n.s.k.	Not specified by kind.
pt.	Part.
r	Revised.
SIC	Standard Industrial Classification.

Other abbreviations, such as lb, gal, yd, doz, bbl, and s tons, are used in the customary sense.

CONTACTS FOR DATA USERS

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Census/ASM		
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Nondurables	Michael Zampogna	(301) 763-2510
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Table 1. Historical Statistics for the Industry: 1987 and Earlier Years

[Excludes data for auxiliaries. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix.]

Year[1]	Companies[2] (no.)	All establishments[3] Total (no.)	All establishments[3] With 20 employees or more (no.)	All employees Number (1,000)	All employees Payroll (million dollars)	Production workers Number (1,000)	Production workers Hours (millions)	Production workers Wages (million dollars)	Value added by manufacture[4] (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expenditures (million dollars)	End-of-year inventories[4] (million dollars)	Ratios Specialization (percent)	Ratios Coverage (percent)
INDUSTRY 2841, SOAP AND OTHER DETERGENTS															
1987 Census	(NA)	753	225	31.4	949.2	19.2	39.0	538.2	5 852.0	5 647.7	11 510.2	337.7	1 206.3	80	91
1986 ASM	(NA)	(NA)	(NA)	32.3	974.5	19.4	40.4	543.1	4 639.1	5 703.2	10 346.1	287.7	1 179.6	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	34.1	946.0	20.0	40.0	528.1	4 481.8	5 529.7	10 052.7	317.0	1 215.7	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	32.8	896.7	19.2	40.8	494.2	4 366.8	5 184.4	9 468.4	318.9	1 144.5	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	35.5	860.5	21.3	42.9	490.6	4 282.5	4 780.6	9 116.6	240.9	1 046.1	(NA)	(NA)
1982 Census	642	723	232	35.4	827.1	21.2	42.5	457.1	4 777.1	4 371.9	9 167.3	281.6	1 059.9	84	91
1981 ASM	(NA)	(NA)	(NA)	38.0	804.2	22.5	46.2	463.3	4 391.9	4 770.6	9 101.8	289.3	1 089.2	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	35.1	714.8	22.4	45.8	419.2	4 353.2	3 979.8	8 274.9	212.4	995.4	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	33.1	639.0	21.5	44.0	377.1	3 353.1	5 635.1	8 915.0	180.4	872.5	(NA)	(NA)
1978 ASM	(NA)	(NA)	(NA)	32.3	586.3	20.9	41.9	339.3	3 143.2	3 337.4	6 407.8	143.2	781.3	(NA)	(NA)
1977 Census	554	635	225	32.1	521.6	20.5	41.0	308.1	2 867.5	2 817.9	5 671.4	134.9	643.4	84	89
1976 ASM	(NA)	(NA)	(NA)	29.8	445.2	19.7	39.2	288.0	2 664.9	2 581.8	5 201.9	124.9	591.4	(NA)	(NA)
1975 ASM	(NA)	(NA)	(NA)	29.4	397.9	19.3	38.1	241.2	2 249.2	2 383.3	4 675.6	107.2	536.0	(NA)	(NA)
1974 ASM	(NA)	(NA)	(NA)	30.9	385.3	20.0	40.5	229.7	2 267.4	2 216.3	4 383.9	103.5	592.1	(NA)	(NA)
1973 ASM	(NA)	(NA)	(NA)	32.4	371.2	20.9	41.3	222.0	2 011.3	1 699.4	3 758.7	77.0	379.9	(NA)	(NA)
1972 Census	577	642	199	31.5	341.6	20.4	40.9	205.9	2 038.8	1 373.7	3 394.4	90.7	361.7	83	90
INDUSTRY 2842, POLISHES AND SANITATION GOODS															
1987 Census	(NA)	698	208	20.3	491.5	13.0	26.1	257.9	3 604.1	1 913.8	5 513.6	118.9	439.5	72	76
1986 ASM	(NA)	(NA)	(NA)	21.1	478.5	13.2	27.9	259.1	3 080.1	1 854.4	4 927.7	105.7	435.5	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	20.2	443.2	12.8	26.4	238.8	2 792.6	1 758.0	4 540.7	78.0	412.3	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	21.9	459.8	13.8	28.2	252.0	2 794.4	2 144.9	4 902.1	87.3	458.9	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	21.2	432.0	13.4	27.4	238.2	2 781.4	1 942.5	4 717.0	55.9	445.9	(NA)	(NA)
1982 Census	747	807	219	23.0	443.7	14.6	29.1	235.1	2 626.2	1 974.4	4 613.7	80.9	483.2	74	78
1981 ASM	(NA)	(NA)	(NA)	24.2	421.7	15.2	28.5	218.3	2 564.3	2 219.5	4 747.2	[3]93.4	412.0	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	24.6	392.8	14.7	26.9	178.3	2 226.4	1 919.0	4 129.7	66.2	396.8	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	24.5	357.5	14.8	26.6	156.1	2 022.3	1 744.3	3 725.8	[3]68.8	350.8	(NA)	(NA)
1978 ASM	(NA)	(NA)	(NA)	23.1	312.8	15.6	29.6	168.1	1 925.0	1 658.8	3 562.4	71.5	302.3	(NA)	(NA)
1977 Census	943	1 018	237	22.0	274.1	14.1	27.2	148.3	1 663.7	1 478.5	3 136.2	51.8	273.5	78	79
1976 ASM	(NA)	(NA)	(NA)	23.5	276.3	13.5	26.7	130.0	1 451.5	1 346.3	2 775.4	51.5	252.4	(NA)	(NA)
1975 ASM	(NA)	(NA)	(NA)	23.8	254.0	13.5	25.9	120.6	1 285.7	1 204.7	2 491.9	42.1	233.9	(NA)	(NA)
1974 ASM	(NA)	(NA)	(NA)	24.4	245.4	13.8	26.9	113.8	1 205.0	1 026.6	2 197.8	35.2	245.6	(NA)	(NA)
1973 ASM	(NA)	(NA)	(NA)	25.5	231.5	14.6	28.8	106.0	1 165.8	821.5	1 971.6	51.9	171.1	(NA)	(NA)
1972 Census	1 022	1 108	243	25.1	216.9	14.7	28.6	100.5	1 118.1	758.6	1 867.6	54.3	151.6	81	83
INDUSTRY 2843, SURFACE ACTIVE AGENTS															
1987 Census	(NA)	214	96	8.9	285.2	4.6	9.8	131.3	1 303.0	1 676.2	2 979.8	103.9	340.0	75	75
1986 ASM	(NA)	(NA)	(NA)	9.5	286.9	4.4	9.5	[3]115.6	1 182.8	1 590.2	2 779.5	71.4	331.2	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	9.3	261.9	4.4	9.2	106.3	1 095.9	1 449.5	2 534.4	78.4	313.2	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	9.3	253.4	4.5	9.4	100.7	1 013.2	1 494.2	2 481.9	76.7	306.7	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	9.0	236.8	4.3	8.9	93.6	836.0	1 426.8	2 275.8	68.8	280.0	(NA)	(NA)
1982 Census	181	210	96	8.5	208.2	3.6	7.9	77.4	747.8	1 314.3	2 087.2	86.6	259.8	81	65
1981 ASM	(NA)	(NA)	(NA)	7.9	182.7	3.9	8.6	72.4	952.4	1 138.9	2 061.5	82.1	197.6	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	7.4	153.2	3.6	7.6	57.9	744.3	980.0	1 732.3	61.8	171.8	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	6.8	127.6	3.4	7.2	52.8	571.8	795.0	1 356.6	87.9	161.0	(NA)	(NA)
1978 ASM	(NA)	(NA)	(NA)	7.0	123.7	3.9	8.3	56.4	458.6	748.8	1 183.5	109.1	162.1	(NA)	(NA)
1977 Census	149	175	84	6.5	101.7	3.7	7.7	47.2	345.0	602.6	943.5	40.9	116.2	81	55
1976 ASM	(NA)	(NA)	(NA)	7.4	108.1	3.9	8.0	48.1	328.4	548.6	867.8	35.6	117.1	(NA)	(NA)
1975 ASM	(NA)	(NA)	(NA)	6.7	91.4	3.7	7.8	42.4	269.7	431.0	705.6	34.7	100.6	(NA)	(NA)
1974 ASM	(NA)	(NA)	(NA)	7.8	95.2	4.4	9.2	46.6	334.3	483.0	797.5	31.6	117.4	(NA)	(NA)
1973 ASM	(NA)	(NA)	(NA)	6.3	73.2	3.4	6.8	32.5	211.3	277.7	488.5	[3]25.1	66.6	(NA)	(NA)
1972 Census	151	178	86	6.9	71.5	3.8	7.7	32.3	209.5	257.0	462.6	19.7	61.4	81	90
INDUSTRY 2844, TOILET PREPARATIONS															
1987 Census	(NA)	682	271	58.4	1 343.5	35.4	71.4	633.1	10 635.6	3 878.1	14 423.9	225.4	1 728.2	95	87
1986 ASM	(NA)	(NA)	(NA)	58.8	1 388.1	33.8	66.0	615.4	9 725.1	3 647.0	13 332.9	276.9	1 563.5	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	59.8	1 250.4	34.7	66.0	582.8	8 975.8	3 527.1	12 426.9	[3]291.0	1 422.2	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	60.9	1 208.4	35.9	67.6	566.5	8 310.0	3 450.2	11 664.9	231.3	1 363.4	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	60.9	1 142.5	36.3	69.9	536.6	7 603.0	3 338.8	10 925.1	245.4	1 248.8	(NA)	(NA)
1982 Census	596	639	257	60.4	1 102.1	35.8	68.6	520.7	7 130.6	3 026.3	10 183.2	220.7	1 136.0	96	89
1981 ASM	(NA)	(NA)	(NA)	54.1	911.5	33.5	63.9	453.4	5 972.8	2 785.0	8 688.2	197.3	1 107.9	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	54.9	853.7	34.0	65.7	436.5	5 413.3	2 450.4	7 874.1	193.1	974.0	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	54.0	773.8	34.9	65.8	402.5	5 190.5	2 286.6	7 422.2	150.7	981.0	(NA)	(NA)
1978 ASM	(NA)	(NA)	(NA)	54.1	721.7	33.6	62.4	356.9	4 957.2	2 329.0	7 228.1	134.5	869.4	(NA)	(NA)
1977 Census	644	693	192	50.9	627.9	32.9	62.9	318.9	4 526.7	2 059.4	6 557.2	105.6	760.3	95	87
1976 ASM	(NA)	(NA)	(NA)	48.2	587.4	32.1	62.4	293.1	4 024.5	1 906.5	5 896.3	75.7	678.4	(NA)	(NA)
1975 ASM	(NA)	(NA)	(NA)	48.3	524.7	30.3	58.0	266.0	3 443.2	1 698.2	5 154.8	70.6	674.8	(NA)	(NA)
1974 ASM	(NA)	(NA)	(NA)	48.2	495.2	30.4	59.4	250.6	3 266.0	1 555.1	4 767.9	53.9	694.1	(NA)	(NA)
1973 ASM	(NA)	(NA)	(NA)	49.6	463.6	31.2	59.5	235.2	3 096.1	1 283.7	4 358.5	72.8	536.2	(NA)	(NA)
1972 Census	593	646	205	48.2	426.2	31.8	61.0	219.6	2 834.1	1 241.1	4 057.3	71.4	469.4	94	86

Note: Establishments of single unit companies with up to 20 employees (cutoff varied by industry) were excluded from the mail portion of the census. Data for these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated) were estimated based on administrative-record information from other agencies in conjunction with industry averages. These establishments accounted for the following percent of total value of shipments: SIC 2841, 8%; SIC 2842, 12%; SIC 2843, 11%; and SIC 2844, 9%.

[1]In annual survey of manufactures (ASM) years, data are estimates based on a representative sample of establishments canvassed annually and may differ from results of a complete canvass of all establishments. ASM publication shows percentage standard errors. Unless otherwise noted, for data prior to 1972, see 1972 Census of Manufactures, vol. II, table 1a of the Industry series.

[2]For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

[3]Includes establishments with payroll at any time during year.

[4]Beginning with the 1982 Census of Manufactures, all respondents were requested to report their inventories at (the lower of) cost or market prior to adjustment to LIFO cost. This is a change from prior Censuses and annual surveys of manufactures in which respondents were permitted to value their inventories using any generally accepted accounting method. Consequently, inventories and value added by manufacture are not comparable to prior-year data.

[5]Estimates for new capital expenditures have associated standard error of 15 percent or more and may be of limited reliability. Estimates for other data items are of acceptable reliability.

Table 2. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 product code	Product	1987			1982		
		Number of companies with shipments of $100,000 or more	Product shipments[1]		Number of companies with shipments of $100,000 or more	Product shipments[1]	
			Quantity[2]	Value (million dollars)		Quantity[2]	Value (million dollars)
2841- —	**SOAP AND OTHER DETERGENTS[3]**						
	Total	**(NA)**	**(X)**	**9 572.3**	**(NA)**	**(X)**	**7 852.3**
28411 —	Soap and detergents, nonhousehold	(NA)	(X)	1 819.5	(NA)	(X)	1 538.5
	Soaps, except specialty cleaners, nonhousehold (bulk products and products sold in containers holding more than 25 lb or more than 1 gallon, for industrial, institutional, or commercial use):						
28411 12	Chips, flakes, granulated, powdered, and sprayed, including washing powders, mil lb	(NA)	*195.8	85.5	37	**328.9	102.3
28411 14	Liquid (potash and other, excluding shampoos), mil gal	(NA)	(S)	91.8	36	12.4	83.9
28411 19	Other soaps, nonhousehold, including mechanics' hand soap, mil lb	(NA)	168.9	103.2	27	**43.2	27.4
	Alkaline detergents, nonhousehold (bulk products and products sold in containers holding more than 25 lb or more than 1 gallon, for industrial, institutional, or commercial use):						
	Machine dishwashing compounds:						
28411 21	Liquid, mil gal	(NA)	*20.8	95.5	29	*10.9	67.9
28411 23	Dry, mil lb	(NA)	158.8	162.7	39	*299.0	129.1
28411 24	Scouring cleaners, do	(NA)	101.1	44.5	9	50.3	13.0
28411 25	Other alkaline detergents, nonhousehold: Liquid, mil gal	(NA)	*70.0	322.4	106	*62.7	252.0
	Dry:						
28411 26	Hard surface cleaners, mil lb	(NA)	214.2	85.8	65	**355.6	151.2
28411 28	Other alkaline detergents, do	(NA)	76.6	56.7	29	(S)	55.1
	Synthetic organic detergents, nonhousehold (bulk products and products sold in containers holding more than 25 lb or more than 1 gallon, for industrial, institutional, or commercial use):						
	Dry (powders):						
28411 41	Anionic base, mil lb	(NA)	136.2	133.8	27	*189.7	109.2
28411 43	Nonionic base or other, do	(NA)	87.4	40(S)	30	(S)	34.9
	Liquid:						
28411 45	Anionic base, mil gal	(NA)	455.6	102.6	41	(S)	122.8
28411 46	Cationic and amphoteric, do	(NA)	5.8	32.5	14	**4.4	21.7
28411 49	Nonionic base or other base, do	(NA)	*36.3	107.3	39	(S)	101.3
	Acid-type cleaners, containing an acid and/or wetting agent, and/or inorganic fillers:						
	Dairy, farm, and food plant cleaners, sanitizers, etc.:						
28411 62	Dry, mil lb	(NA)	28.0	17.6	14	(S)	12.3
	Liquid:						
28411 65	Halogenated, mil gal	(NA)	15.9	32.7	14	(S)	12.9
28411 67	Nonhalogenated, do	(NA)	(S)	91.2	27	**13.0	59.1
	Metal cleaners:						
28411 73	Dry, mil lb	(NA)	**12.6	14.5	24	(S)	28.4
28411 77	Liquid, mil gal	(NA)	7.7	44.1	37	(S)	56.6
28411 79	All other	(NA)	(X)	48.4	22	(S)	40.7
28411 00	Soaps and detergents, nonhousehold, n.s.k.	(NA)	(X)	106.5	(NA)	(X)	76.7
28412 —	Household detergents	(NA)	(X)	5 244.6	(NA)	(X)	4 349.3
	Alkaline detergents, household (products sold in containers holding 25 lb or less or 1 gallon or less; for use by family units):						
	Machine dishwashing compounds:						
28412 01	Liquid, mil gal	(NA)	(S)	113.6	7	(S)	11.5
28412 03	Dry, mil lb	(NA)	*419.5	247.4	15	644.2	337.3
	Liquid hard surface cleaners, including general-purpose cleaners and degreasers:						
28412 07	Aerosol and spray type (including refills for refillable containers), mil gal	(NA)	15.3	64.9	11	15.5	52.1
28412 08	Other liquid, do	(NA)	21.7	106.8	11	(S)	50.3
28412 12	Scouring cleaners, mil lb	(NA)	429.4	234.0	7	(D)	(D)
	Other alkaline detergents, household:						
28412 15	Liquid, mil gal	(NA)	(D)	(D)	11	(D)	(D)
28412 18	Dry (including hard surface cleaners), mil lb	(NA)	(D)	(D)	9	(D)	(D)
	Synthetic organic detergents, household (products sold in containers holding 25 lb or less or 1 gallon or less; for use by family units):						
	Dry (solid or powders):						
28412 21	Light-duty, mil lb	(NA)	212.9	93.8	13	(S)	121.7
	Heavy-duty:						
28412 24	Phosphate based, mil lb	(NA)	2 644.1	1 548.6	18	2 641.4	1 503.0
28412 26	Phosphate free, do	(NA)	1 021.7	464.5	18	759.5	367.8
	Liquid, excluding shampoos:						
28412 31	Light-duty, mil gal	(NA)	(S)	497.6	21	176.8	831.6
28412 35	Heavy-duty, do	(NA)	330.2	1 173.2	16	(S)	585.1
28412 61	Presoaks, mil lb	(NA)	116.6	134.3	12	(S)	128.0
28412 00	Household detergents, n.s.k.	(NA)	(X)	34.5	(NA)	(X)	30.2
28413 —	Soaps, except specialty cleaners, household	(NA)	(X)	1 422.9	(NA)	(X)	1 220.4
	Products sold in containers holding 25 lb or less or 1 gallon or less; for use by family units:						
	Toilet soaps, excluding medicated soaps:						
28413 11	Bars, mil lb	(NA)	940.9	1 193.5	32	893.3	960.8
28413 15	Liquid, mil gal	(NA)	31.0	136.5	14	25.5	78.6
28413 22	Chips, flakes, granulated, powdered, and sprayed, including washing powders, mil lb	(NA)			11	(S)	90.3
28413 97	Other soaps, household, including mechanics' hand soaps (except waterless), medical, and medicated soaps (containing medicinal or germicidal additives of therapeutic value but not soaps containing germicidal or other additives only as a deodorant), bars, liquid, and paste	(NA)	(X)	89.1	14	(X)	56.7

See footnotes at end of table.

Table 2. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 product code	Product	1987			1982		
		Number of companies with shipments of $100,000 or more	Product shipments[1]		Number of companies with shipments of $100,000 or more	Product shipments[1]	
			Quantity[2]	Value (million dollars)		Quantity[2]	Value (million dollars)
2841- —	**SOAP AND OTHER DETERGENTS[3]—Con.**						
28413 —	Soaps, except specialty cleaners, household—Con.						
	Products sold in containers holding 25 lb or less or 1 gallon or less; for use by family units—Con.						
28413 00	Soaps, except specialty cleaners, n.s.k.	(NA)	(X)	3.7	(NA)	(X)	34.0
28414 —	Glycerin, natural[4]	(NA)	(X)	181.5	(NA)	(X)	153.7
28414 11	Crude, 100 percent basis ..... mil lb	(NA)	48.4	40.5	9	101.2	54.2
28414 31	High-gravity, dynamite, and yellow distilled 100 percent basis ..... do	(NA)	24.4	20.6	5	81.2	58.7
28414 51	Chemically pure, 100 percent basis ..... do	(NA)	166.5	118.8	5	*58.2	38.2
28414 00	Glycerin, natural, n.s.k.	(NA)	(X)	1.6	(NA)	(X)	2.6
28410 —	Soap and other detergents, n.s.k.	(NA)	(X)	903.9	(NA)	(X)	590.2
28410 00	Soap and other detergents, n.s.k., typically for establishments with 10 employees or more (see note)	(NA)	(X)	419.5	(NA)	(X)	431.8
28410 02	Soap and other detergents, n.s.k., typically for establishments with less than 10 employees (see note)	(NA)	(X)	484.4	(NA)	(X)	158.4
2842- —	**POLISHES AND SANITATION GOODS**						
	Total	**(NA)**	**(X)**	**5 090.1**	**(NA)**	**(X)**	**4 047.1**
28422 —	Household bleaches	(NA)	(X)	812.3	(NA)	(X)	528.4
28422 43	Household liquid bleaches (sodium hypochlorite, etc.) (for additional detail, see Current Industrial Report MA-28A, Inorganic Chemicals)	(NA)	(X)	607.1	40	(X)	385.4
28422 53	Household dry bleaches (calcium hypochlorite, etc.) (for additional detail, see Current Industrial Report MA-28A, Inorganic Chemicals)	(NA)	(X)	196.3	19	(X)	137.8
28422 00	Household bleaches n.s.k.	(NA)	(X)	9.0	(NA)	(X)	5.3
28423 —	Specialty cleaning and sanitation products	(NA)	(X)	2 699.0	(NA)	(X)	2 327.8
28423 11	Glass window cleaning preparations	(NA)	(X)	200.5	51	(X)	179.1
28423 21	Oven cleaners	(NA)	(X)	59.1	18	(X)	57.3
28423 26	Toilet bowl cleaners	(NA)	(X)	238.4	54	(X)	177.7
28423 28	Drain pipe solvents	(NA)	(X)	75.5	27	(X)	81.8
28423 32	Disinfectants, for uses other than agricultural	(NA)	(X)	375.6	86	(X)	345.7
28423 42	Dry cleaning spotting preparations (liquid, gels, and solid)	(NA)	(X)	14.6	15	(X)	17.4
	Household laundry aids:						
	Fabric softeners and rinses:						
28423 44	Liquid	(NA)	(X)	478.3	34	(X)	348.3
28423 45	Dry	(NA)	(X)	224.0	7	(X)	298.4
	Laundry starch preparations, including permanent types (resins, starch, etc.):						
28423 47	Aerosol and other spray types	(NA)	(X)	57.7	10	(X)	53.9
28423 49	Other, liquid and dry	(NA)	(X)	15.3	7	(X)	10.2
	Rug and upholstery cleaners:						
28423 51	Consumer type preparations	(NA)	(X)	129.5	34	(X)	97.3
28423 53	Industrial and institutional	(NA)	(X)	39.5	(D)	(X)	(D)
28423 71	Household ammonia	(NA)	(X)	30.2	16	(X)	33.1
	Deodorants, nonpersonal:						
28423 81	Aerosol type	(NA)	(X)	77.2	18	(X)	62.9
28423 85	Other	(NA)	(X)	276.2	48	(X)	170.4
28423 95	Other specialty detergents, including sweeping compounds, waterless hand cleaners, ironing aids, and cleaners for wallpapers, window shades, and walls	(NA)	(X)	264.8	*120	(X)	*249.9
28423 00	Specialty cleaning and sanitation products, n.s.k.	(NA)	(X)	142.6	(NA)	(X)	144.3
28424 —	Polishing preparations and related products	(NA)	(X)	797.6	(NA)	(X)	648.0
28424 11	Automobile body polish and cleaners	(NA)	(X)	185.1	41	(X)	108.2
28424 15	Furniture polish and cleaners	(NA)	(X)	155.3	23	(X)	142.3
	Floor polish:						
28424 21	Water emulsion ..... mil gal	(NA)	29.4	203.7	74	32.7	191.3
28424 23	Liquid (nonemulsion) ..... do	(NA)	5.9	33.4	21	(S)	24.9
28424 25	Other than liquid form, including paste and cake ..... mil lb	(NA)	(S)	7.9	6	*6.7	7.2
	Shoe polishes and cleaners:						
28424 42	Liquid ..... mil gal	(NA)	(S)	23.1	9	1.9	26.6
28424 44	Paste and cake ..... mil lb	(NA)	2.7	19.7	9	5.2	27.9
28424 63	Leather dressings and finishes, excluding shoe polish ..... do	(NA)	(S)	45.9	11	(S)	31.7
28424 98	Related products, including metal polish and polishing cloths and papers	(NA)	(X)	81.1	38	(X)	51.5
28424 00	Polishing preparations and related products, n.s.k.	(NA)	(X)	42.4	(NA)	(X)	36.5
28420 —	Polishes and sanitation goods, n.s.k.	(NA)	(X)	781.1	(NA)	(X)	542.9
28420 00	Polishes and sanitation goods, n.s.k., typically for establishments with 10 employees or more (see note)	(NA)	(X)	521.7	(NA)	(X)	431.2
28420 02	Polishes and sanitation goods, n.s.k., typically for establishments with less than 10 employees (see note)	(NA)	(X)	259.4	(NA)	(X)	111.7

See footnotes at end of table.

Table 2. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 product code	Product	1987			1982		
		Number of companies with shipments of $100,000 or more	Product shipments[1]		Number of companies with shipments of $100,000 or more	Product shipments[1]	
			Quantity[2]	Value (million dollars)		Quantity[2]	Value (million dollars)
2843- —	**SURFACE ACTIVE AGENTS**						
	Total	**(NA)**	**(X)**	**2 835.7**	**(NA)**	**(X)**	**2 495.7**
28430 —	Surface active agents, finishing agents, and assistants:						
	Assistants and finishes, textile and leather, except surface active agents and tanning agents:						
	Assistants:						
28430 31	Textile — mil lb	(NA)	225.6	112.7	27	[r]142.4	84.5
28430 35	Leather — do	(NA)	(*)	(*)	5	43.2	19.6
	Finishes:						
28430 61	Textile — mil lb	(NA)	220.3	115.6	33	196.3	89.7
28430 65	Leather — do	(NA)	[r]27.0	[r]22.4	6	(S)	30.9
28430 85	Bulk surface active agents (for detailed statistics, see U.S. ITC publication, Synthetic Organic Chemicals, 1987 and 1982) (including all bulk surface active agents that reduce surface tension of water or other solvents and are used chiefly as detergents, dispersing agents, emulsifiers, foaming agents, or wetting agents in either aqueous or nonaqueous systems, excluding surface active ingredients in formulated products)	(NA)	(X)	2 283.0	123	(X)	2 036.9
28430 00	Surface active agents, finishing agents, and assistants, n.s.k., typically for establishments with 10 employees or more (see note)	(NA)	(X)	229.2	(NA)	(X)	193.6
28430 02	Surface active agents, finishing agents, and assistants, n.s.k., typically for establishments with less than 10 employees (see note)	(NA)	(X)	72.8	(NA)	(X)	40.4

1987 product code	Product	1987		1982	
		Number of companies with shipments of $100,000 or more	Value of product shipments[1] (million dollars)	Number of companies with shipments of $100,000 or more	Value of product shipments[1] (million dollars)
2844- —	**TOILET PREPARATIONS**				
	Total	**(NA)**	**14 729.8**	**(NA)**	**10 437.1**
28441 —	Shaving preparations	(NA)	480.7	(NA)	328.7
28441 49	Shaving soap and cream	(NA)	206.2	23	142.9
28441 56	Aftershave preparations (all forms)	(NA)	260.0	26	167.5
28441 59	Other shaving preparations, including preshave preparations and styptics	(NA)	12.9	7	16.3
28441 00	Shaving preparations, n.s.k.	(NA)	1.5	(NA)	2.1
28442 —	Perfumes, toilet water, and colognes	(NA)	1 990.9	(NA)	1 634.1
28442 11	Perfume oil mixtures and blends	(NA)	415.8	36	324.9
28442 23	Perfumes	(NA)	205.0	33	227.3
28442 35	Toilet waters	(NA)	219.7	23	322.6
28442 45	Colognes	(NA)	965.1	40	750.4
28442 00	Perfumes, toilet water, and colognes, n.s.k.	(NA)	185.2	(NA)	8.9
28443 —	Hair preparations (including shampoos)	(NA)	3 597.5	(NA)	2 430.0
	Shampoos, including products with additives for tints, coloring, or dandruff removal:				
	Containing soap:				
28443 11	Professional	(NA)	26.0	13	53.3
28443 12	Consumer use	(NA)	253.5	30	132.7
	Synthetic organic detergents:				
	Liquid:				
28443 14	Professional	(NA)	76.3	25	49.9
28443 15	Consumer use	(NA)	831.5	52	651.5
28443 18	Cream and gels	(NA)	38.9	7	61.6
	Hair tonics, including hair and scalp conditioners:				
28443 20	Professional	(NA)	70.4	22	53.0
28443 22	Consumer use	(NA)	423.2	41	191.2
	Hair mousse:				
28443 25	Professional	(NA)	8.4	(?)	(?)
28443 27	Consumer use	(NA)	74.0	(?)	(?)
	Perms:				
28443 36	Home (complete and refill)	(NA)	112.7	17	113.2
28443 39	Commercial	(NA)	210.7	21	113.5
28443 41	Hair dressings, including brilliantines, creams, and pomades	(NA)	108.5	15	70.8
28443 51	Hair coloring preparations (bleaches, dyes, rinses, tints, etc.)	(NA)	567.8	15	331.7
	Hair spray:				
28443 63	Aerosol	(NA)	372.5	31	217.5
28443 64	Nonaerosol	(NA)	224.7	25	175.4
28443 65	Hair rinses (excluding color rinses)	(NA)	34.8	11	82.6
28443 95	Other hair preparations, including heat setting wave solutions	(NA)	96.4	[r]20	[r]100.3
28443 00	Hair preparations (including shampoos), n.s.k.	(NA)	65.2	(NA)	31.8
28444 —	Dentifrices, including mouthwashes, gargles, and rinses	(NA)	1 309.2	(NA)	1 178.9
28444 21	Toothpaste, including gels and tooth powder	(NA)	838.6	18	744.6
28444 71	Mouthwashes, rinses, and breath fresheners (except antiseptic)	(NA)	438.8	29	434.3
28444 95	Other oral hygiene products, including dental floss, dental adhesives, and denture cleaner, excluding toothbrushes and toothpicks	(NA)			
28444 00	Dentifrices, including mouthwashes, gargles, and rinses, n.s.k.	(NA)	1.6	(NA)	-

See footnotes at end of table.

Table 2. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 product code	Product	1987		1982	
		Number of companies with shipments of $100,000 or more	Value of product shipments[1] (million dollars)	Number of companies with shipments of $100,000 or more	Value of product shipments[1] (million dollars)
2844- —	**TOILET PREPARATIONS**—Con.				
28445 —	Other cosmetics and toilet preparations	(NA)	6 454.5	(NA)	4 266.5
	Creams, excluding shaving, hair, and deodorant:				
28445 02	Cleansing creams	(NA)	182.3	31	177.7
28445 03	Foundation creams	(NA)	493.7	22	143.4
28445 04	Lubricating creams, including hormone creams	(NA)	370.9	22	186.3
28445 05	Other creams	(NA)	167.6	23	106.1
	Lotions and oils (excluding hair, shaving preparations, and bath):				
28445 06	Suntan lotions and oils	(NA)	135.7	22	96.1
28445 09	Sunscreens and sunblocks	(NA)	69.1		
28445 16	Cleansing lotions	(NA)	124.5	23	83.0
28445 17	Cosmetic oils, including baby oils but excluding suntan oils	(NA)	25.6	15	32.4
28445 18	Hand lotions	(NA)	399.1	44	206.8
28445 19	Other lotions and oils, excluding hair, shaving, and bath	(NA)	276.5	21	244.2
28445 21	Lip preparations (lipstick, lip gloss, lip conditioners, etc.)	(NA)	502.5	34	395.5
28445 22	Blushers	(NA)	154.3	28	161.6
28445 23	Eye preparations (mascara, eye shadow, eye liners, eye creams, etc.)	(NA)	656.3	33	499.0
28445 25	Feminine hygiene douches (except medicated)	(NA)	(D)	5	(D)
	Deodorant (personal):				
	Underarm:				
28445 27	Aerosol and spray type	(NA)	283.2	18	239.0
28445 28	Roll-on, solids, etc.	(NA)	724.2	37	491.0
28445 29	Feminine hygiene deodorants, all types	(NA)	(D)	7	43.2
	Manicuring preparations:				
28445 31	Nail enamels and polishes	(NA)	281.7	28	234.0
28445 33	Nail enamel and polish removers	(NA)	49.9	15	42.9
28445 39	Other manicuring preparations (including nail and cuticle conditioners)	(NA)	49.8	8	39.8
	Powder:				
28445 41	Talcum and toilet powder	(NA)	213.8	35	213.2
28445 43	Face powder (pressed and loose)	(NA)	136.6	25	111.5
28445 50	Other powder, including foot powder, etc.	(NA)	47.2	14	42.6
28445 55	Premoistened towelettes, including wipes for babies	(NA)	244.0	7	43.6
28445 59	Facial scrubs and masks	(NA)	53.1	(D)	(D)
28445 61	Bath salts, tablets, oils, and bubble baths	(NA)	151.0	37	169.2
28445 91	Depilatories	(NA)	21.5	6	15.6
28445 99	Other cosmetics and toiletries	(NA)	*391.9	23	*,*212.2
28445 00	Other cosmetics and toilet preparations, n.s.k.	(NA)	268.5	(NA)	30.7
28440 —	Toilet preparations, n.s.k.				
28440 00	Toilet preparations, n.s.k., typically for establishments with 5 employees or more (see note)	(NA)	898.8	(NA)	598.9
28440 02	Toilet preparations, n.s.k., typically for establishments with less than 5 employees (see note)	(NA)	530.0	(NA)	458.9
		(NA)	366.8	(NA)	140.0

Note: In 1987 Census of Manufactures, data for establishments of small single unit companies with up to 20 employees were estimated from administrative-record data rather than data actually collected from respondents. Employment cutoffs used for administrative records for each industry and shipments figures are included in code ending with "002". In both 1987 and 1982 Censuses of Manufactures, products not completely identified on standard forms were coded in appropriate product class (five-digit) followed by "00" or to appropriate product group code (four-digit) followed by "000".

[1]Data reported by all producers, not just those with shipments of $100,000 or more.

[2]For some establishments, data have been estimated from central unit values which are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: * 10 to 19 percent estimated; ** 20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by (S).

[3]Definitions for specified product: Alkaline detergents—Mixtures designated primarily for cleaning hard surfaces such as dishes, floors, walls, counters, vehicles, appliances, etc. Soap—Products including combinations of synthetic organic surface active agents and alkaline detergents, containing more than 25 percent anhydrous soap. Heavy-duty phosphate-based detergents—Detergents products for laundry applications with a substantial phosphate builder. Light-duty detergents—Detergent products for hand dishwashing and for fine fabrics with little or no phosphate builder. Presoaks–Products containing essentially one or more of the following ingredients: alkaline compounds, synthetic organic surface active agents, soap, and soil releasing agents, such as (but not confined to) protease, amylase, and liposes (enzymes).

[4]Data on quantities of glycerine produced are shown in Current Industrial Report M20K, Fats and Oils - Production, Consumption, and Factory Warehouse Stock (synthetic and natural), and U.S. International Trade Commission Report Synthetic Organic Chemicals, U.S. Production and Sales (synthetic only).

[5]For 1982, product code 2842353 was included with product code 2842395.

[6]For 1987, product code 2843035 is combined with product code 2843065 to avoid disclosing data for individual companies.

[7]For 1982, products codes 2844325 and 2844327 were not collected separately and were reported under product code 2844395.

[8]For 1987, product codes 2844525 and 2844529 are combined with product code 2844599 to avoid disclosing data for individual companies. For 1982, product code 2844525 was combined with product code 2844599 for the same reason.

[9]For 1982, product code 2844559 was not collected separately and was reported under product code 2844599.

Table 3. Materials Consumed by Kind: 1987 and 1982

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 material code	Material	1987		1982	
		Quantity[1]	Delivered cost (million dollars)	Quantity[1]	Delivered cost (million dollars)
	INDUSTRY 2841, SOAP AND OTHER DETERGENTS				
	Materials, containers, and supplies	(X)	**5 123.1**	(X)	**3 689.4**
284303	Bulk surface active intermediates (active wt) ..... mil lb	313.9	125.5	174.0	91.5
	Bulk surface active agents, excluding surface active intermediates, other than sulfonated oils and assistants:				
284305	Primarily for detergent purposes (active wt) ..... mil lb	382.4	173.2	499.5	211.8
284306	Other emulsifiers, wetting agents, penetrants, etc. (active wt) ..... do	63.6	24.5	111.9	40.0
284141	Glycerin (100%) ..... do	19.5	10.6	42.7	27.5
207011	Vegetable oil ..... do	287.1	53.9	(S)	55.5
284421	Perfume oil mixtures and blends ..... do	555.3	392.2	**15.9	67.7
289921	Fatty acids ..... do	*72.0	22.5	228.1	63.9
207711	Grease and inedible tallow ..... do	502.4	100.3	278.0	52.8
281211	Chlorine (100% Cl) ..... 1,000 s tons	(S)	11.7	(S)	19.1
281976	Sodium sulfate (100%) ..... do	476.0	40.9	471.8	60.5
281226	Sodium carbonate (soda ash) (58% Na_2O) ..... do	626.0	70.0	569.2	73.4
281238	Sodium hydroxide (caustic soda) (100% NaOH) ..... do	*514.9	57.1	(S)	89.8
281972	Sodium tripolyphosphate (STPP) (100% $Na_5P_3O_{10}$) ..... do	427.3	281.9	506.0	348.1
	Sodium silicates:				
281978	Water glass type (100%) ..... 1,000 s tons	72.6	15.1	(S)	37.8
281979	Other, including meta silicate, orthosilicate, and sesquisilicate (100%) ..... do	203.6	33.3	(S)	34.0
281904	Sulfur compounds, including sulfur trioxide (SO_3), sulfuric acid, and oleum (100% H_2SO_4) ..... do	*353.6	65.9	433.6	46.1
291002	Refined petroleum products, including mineral oil, naphtha solvents, petrolatum, waxes, etc., except surface active intermediates	(X)	34.0	(X)	101.9
284102	Finished synthetic organic detergents, in bulk, requiring no further chemical processing	(X)	46.7	(X)	40.6
280008	All other organic and inorganic chemicals, n.e.c.	(X)	872.2	(X)	(3)
270011	Labels, coupons, instructions, and other printed materials	(X)	212.5	(X)	60.7
	Containers:				
265001	Paperboard containers, boxes, and corrugated paperboard	(X)	495.7	(X)	260.9
340001	Metal	(X)	36.0	(X)	81.2
322101	Glass	(X)	4.5	(S)	13.7
308015	Plastics	(X)	510.2	(X)	286.9
970099	All other materials and components, parts, containers, and supplies	(X)	869.9	(X)	[3] 178.4
971000	Materials, containers, and supplies, n.s.k.[2]	(X)	562.8	(X)	345.8
	INDUSTRY 2842, POLISHES AND SANITATION GOODS				
	Materials, containers, and supplies	(X)	**1 710.9**	(X)	**1 690.7**
284303	Bulk surface active intermediates (active wt) ..... mil lb	*18.8	8.4	(S)	8.4
	Bulk surface active agents, excluding surface active intermediates, other than sulfonated oils and assistants:				
284305	Primarily for detergent purposes (active wt) ..... mil lb	(S)	85.9	**132.8	59.6
284306	Other emulsifiers, wetting agents, penetrants, etc. (active wt) ..... do	**39.8	17.7	95.3	32.4
284141	Glycerine (100%) ..... do	(*)	(*)	(D)	(*)
207011	Vegetable oil ..... do	(S)	1.9	*10.8	3.2
284421	Perfume oil mixtures and blends ..... do	*10.6	44.5	(S)	35.9
289921	Fatty acids ..... do	**16.9	5.8	*14.3	6.3
207711	Grease and inedible tallow ..... do	(S)	4.7	*3.9	1.7
281211	Chlorine (100% Cl) ..... 1,000 s tons	**201.6	29.6	*162.1	22.1
281976	Sodium sulfate (100%) ..... do	*12.3	2.0	(S)	2.6
281226	Sodium carbonate (soda ash) (58% Na_2O) ..... do	103.5	12.1	**123.5	11.7
281238	Sodium hydroxide (caustic soda) (100% NaOH) ..... do	190.2	24.1	*223.8	33.6
281972	Sodium tripolyphosphate (STPP) (100% $Na_5P_3O_{10}$) ..... do	**11.8	4.3	18.0	11.1
	Sodium silicates:				
281978	Water glass type (100%) ..... 1,000 s tons	(S)	.6	*5.8	.4
281979	Other, including meta silicate, orthosilicate, and sesquisilicate (100%) ..... do	(S)	1.9	(S)	2.0
281904	Sulfur compounds, including sulfur trioxide (SO_3), sulfuric acid, and oleum (100% H_2SO_4) ..... do	(S)	.9	(S)	1.9
291002	Refined petroleum products, including mineral oil, naphtha solvents, petrolatum, waxes, etc., except surface active intermediates	(X)	40.1	(X)	44.5
284102	Finished synthetic organic detergents, in bulk, requiring no further chemical processing	(X)	16.6	(X)	10.8
280008	All other organic and inorganic chemicals, n.e.c.	(X)	222.4	(X)	(3)
270011	Labels, coupons, instructions, and other printed materials	(X)	28.1	(X)	24.4
	Containers:				
265001	Paperboard containers, boxes, and corrugated paperboard	(X)	132.3	(X)	144.6
340001	Metal	(X)	139.2	(X)	97.1
322101	Glass	(X)	6.9	(S)	20.1
308015	Plastics	(X)	226.8	(X)	254.2
970099	All other materials and components, parts, containers, and supplies	(X)	*269.0	(X)	[3] *441.9
971000	Materials, containers, and supplies, n.s.k.[2]	(X)	405.1	(X)	429.2

See footnotes at end of table.

Table 3. Materials Consumed by Kind: 1987 and 1982—Con.

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 material code	Material	1987 Quantity[1]	1987 Delivered cost (million dollars)	1982 Quantity[1]	1982 Delivered cost (million dollars)
	INDUSTRY 2843, SURFACE ACTIVE AGENTS				
	Materials, containers, and supplies	(X)	**1 486.1**	(X)	**1 178.9**
284303	Bulk surface active intermediates (active wt) mil lb	118.5	70.5	(S)	87.3
	Bulk surface active agents, excluding surface active intermediates other than sulfonated and assistants:				
284305	Primarily for detergent purposes (active wt) mil lb	150.6	55.6	196.3	76.6
284306	Other emulsifiers, wetting agents, penetrants, etc. (active wt) do	109.3	44.6	(S)	13.1
284141	Glycerine (100%) do	10.7	7.7	3.4	2.5
207011	Vegetable oil do	123.0	32.0	*35.6	10.9
284421	Perfume oil mixtures and blends do	(S)	.2	*.4	.4
289921	Fatty acids do	*197.4	55.2	(S)	24.5
207711	Grease and inedible tallow do	147.3	29.8	*62.1	10.6
281211	Chlorine (100% Cl) 1,000 s tons	**40.9	8.7	(D)	(D)
281976	Sodium sulfate (100%) do	(D)	(D)	(D)	(D)
281228	Sodium carbonate (soda ash) (58% Na_2O) do	(S)	1.2	(D)	(D)
281238	Sodium hydroxide (caustic soda) (100% NaOH) do	*40.7	48.4	**69.3	7.7
281972	Sodium tripolyphosphate (STPP) (100% $Na_5P_3O_{10}$) do	(S)	.5	(S)	.1
	Sodium silicates:				
281978	Water glass type (100%) 1,000 s tons	(D)	(D)	–	–
281979	Other, including meta silicate, orthosilicate, and sesquisilicate (100%) do	(S)	.3	(S)	.3
281904	Sulfur compounds, including sulfur trioxide (SO_3), sulfuric acid, and oleum (100% H_2SO_4) do	57.1	9.1	107.4	11.2
291002	Refined petroleum products, including mineral oil, naphtha solvents, petrolatum, waxes, etc., except surface active intermediates	(X)	156.0	(X)	38.5
284102	Finished synthetic organic detergents, in bulk, requiring no further chemical processing	(X)	6.0	(X)	(D)
280008	All other organic and inorganic chemicals, n.e.c.	(X)	461.2	(X)	(3)
270011	Labels, coupons, instructions, and other printed materials	(X)	.6	(X)	(D)
	Containers:				
265001	Paperboard containers, boxes, and corrugated paperboard	(X)	13.2	(X)	8.6
340001	Metal	(X)	18.7	(X)	14.0
322101	Glass	(X)	.2	(D)	(D)
308015	Plastics	(X)	2.4	(X)	1.1
970099	All other materials and components, parts, containers and supplies	(X)	219.4	(X)	[3]757.7
971000	Materials, containers, and supplies, n.s.k.[2]	(X)	246.5	(X)	81.7

1987 material code	Material	1987 delivered cost (million dollars)	1982 delivered cost (million dollars)
	INDUSTRY 2844, TOILET PREPARATIONS		
	Materials, containers, and supplies	**3 364.2**	**2 728.3**
284421	Perfume oil mixtures and blends	210.1	178.5
286931	Perfume materials (synthetic organic)	49.3	73.4
289951	Essential oils, natural	102.4	54.0
284307	Bulk surface active agents other than sulfonated oils and fats	63.3	125.1
207020	Fats, oils, greases, and tallow (animal including lanolin and marine, and vegetable including carnauba and other vegetable waxes)	75.0	64.5
281302	Industrial gases, compressed and liquefied, including argon, carbon dioxide, nitrogen, and nitrous oxide, but excluding halogen	5.1	13.5
291102	Refined petroleum products, including mineral oil, naphtha, solvents, petrolatum, waxes, etc.	70.7	67.8
286955	Alcohols	59.5	59.4
286906	Other synthetic organic chemicals, including halogenated hydrocarbons	97.4	296.6
281970	Silicates	49.6	32.2
308008	Fabricated plastics products, except plastics containers	126.2	127.6
	Containers:		
308015	Plastics	589.7	451.6
322102	Glass	147.5	203.9
260091	Paper and paperboard containers, including shipping sacks and other paper packaging supplies	366.4	315.1
340001	Metal	144.6	123.8
970099	All other materials and components, parts, containers, and supplies	427.6	356.2
971000	Materials, containers, and supplies, n.s.k.[2]	779.8	205.1

[1]For some establishments, data have been estimated from central unit values which are based on quantity-cost relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: * 10 to 19 percent estimated; ** 20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by (S).

[2]Total cost of materials of establishments that did not report detailed materials data, including establishments that were not mailed a form.

[3]For 1982, material code 280008 was combined with material code 970099.

[4]For 1987 and 1982, material code 284141 was combined with material code 970099 to avoid disclosing data for individual companies.

APPENDIX
Scope and Coverage and Explanation of Terms

GENERAL

The 1987 Census of Manufactures is the 32nd census of manufacturing establishments conducted in the United States. For 1987, it was conducted as part of the economic censuses, which included the censuses of mineral industries, construction industries, retail and wholesale trades, service industries, selected transportation activities, and minority-owned and women-owned businesses, under authority of title 13 of the United States Code. Title 13 specifies that an economic census be conducted every 5 years to cover years ending in 2 and 7.

SCOPE AND COVERAGE

Establishment Basis of Reporting

The census of manufactures is conducted on an establishment basis. All manufacturing establishments with one paid employee or more at any time during the year are covered by the census of manufactures. Therefore, a company operating at more than one location is required to file a separate report for each location. This report excludes information for separately operated administrative offices, warehouses, garages, and other auxiliary units which service manufacturing establishments of the same company. Where these auxiliary operations are conducted at the same location as the manufacturing operation, they are usually included in the report for the operating manufacturing establishment.

Use of Administrative Records

From a universe of approximately 350,000 manufacturing establishments in the 1987 Census of Manufactures, approximately 150,000 small single-establishment companies were excused from filing reports. Selection of the small establishment nonmail cases was done on an industry-by-industry basis. A variable cutoff was used to determine those establishments for which administrative records were to be used in place of a census report. The cutoffs were selected so the administrative-record cases would account for approximately 3 percent or less of the value of shipments for the industry. These cutoffs were then adjusted so that all single-establishment companies with less than 5 employees were excluded from the mail canvass, while all establishments with more than 20 employees were included. Where establishments in the 5 to 20 employee size range were included in the mail canvass, an abbreviated census form was frequently used.

For these nonmail establishments, (and a small number of larger establishment whose reports were not received at the time the data were tabulated) data on employment, payroll, and receipts were obtained from administrative records of other government agencies rather than from census forms. The administrative-record information was then used in conjunction with industry averages to estimate the data for these establishments. The value of shipments and cost of materials were not distributed among specific products and materials but were included in the product and material "not specified by kind" (n.s.k.) categories.

EXPLANATION OF TERMS

Number of establishments and companies–A separate report was required for each manufacturing establishment (plant) with one employee or more. An establishment is defined as a single physical location where manufacturing is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

All employees–Includes all full-time and part-time employees on the payrolls at any time during the year. Included are all persons on paid sick leave, paid holidays, and paid vacations. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded. The "all employees" number is the average number of production workers plus the number of other employees in mid-March. The number of production workers is the average of those for midmonth payroll periods of March, May, August, and November.

Production workers–Includes workers up through the working-supervisor level engaged in fabricating, processing, assembling, inspecting, receiving, packing, warehousing, shipping (but not delivering), maintenance, repair, janitorial, guard services, product development, auxiliary production for plant's own use (e.g., powerplant), recordkeeping, and other closely associated services. Truckdrivers delivering ready-mixed concrete are also included in production workers.

Other employees–Includes nonproduction personnel, including those engaged in the following activities: supervision above working-supervisor level, sales (including driver/salespersons), sales delivery (truckdrivers and helpers), advertising, credit collection, installation and

servicing of own product, clerical and routine office functions, executive, purchasing, finance, legal, personnel (including cafeteria, etc.), professional, and technical employees.

Payroll–Includes the gross earnings for the "employees" defined above, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. Respondents were told that in reporting they could follow the definition of payrolls used for calculating the Federal withholding tax.

Production-worker hours–Covers hours worked or paid for at the plant, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave when the employee was not at the plant.

Cost of materials–Refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these materials. It includes the cost of materials or fuels consumed, regardless of whether they were purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.

The important components of this cost item are (a) all raw materials, semifinished goods, parts, containers, scrap, and supplies put into production or used as operating supplies and for repair and maintenance during the year; (b) electric energy purchased; (c) fuels consumed for heat, power, or generating electricity; (d) work done by others on materials or parts furnished by manufacturing establishments (contract work); and (e) products bought and resold in the same condition.

Specific materials consumed (table 3)–In addition to the total cost of materials which every establishment was required to report, information was also collected for most manufacturing industries on the consumption of major materials used in manufacturing. These inquiries were restricted to those materials which were important parts of the cost of production in a particular industry and for which cost information was available from manufacturers' records. Establishments consuming less than a specified amount (usually $10,000) of a specific material were not requested to report consumption of that material separately. Also, the cost of materials for the small establishments for which administrative records were used was estimated as "not specified by kind" (n.s.k.).

Value of shipments and other receipts–Generally refers to received or receivable net selling values, f.o.b. plant (exclusive of freight and taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts such as receipts for contract work performed for others, installation and repair receipts, sale of scrap, and sale of products bought and resold without further processing. Included are all items made by or for the establishment from materials owned by it whether sold, transferred to other plants of the same company, or shipped on consignment. The net selling value of products made in one plant on a contract basis from materials owned by another was reported by the plant providing the materials.

In a few industries, the value of production or value of work completed is used instead of value of shipments. These industries are identified in the introduction and are footnoted in table 1.

In the case of multiunit companies, the manufacturer was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, that is, including not only the direct costs of production but also a reasonable proportion of "all other costs" (including company overhead and profit).

Shipments or production of individual products (table 2)–In the 1987 census, detailed shipment information was collected for approximately 11,000 individual products. These products are identified by a seven-digit code and are grouped into approximately 1,500 classes of products, which in turn are primary to 459 four-digit industries. Data at the five-digit product-class level have been collected each year as part of the annual survey of manufactures. Information at the seven-digit level, collected for many industries in the current industrial reports program, is not included in this table.

Value added by manufacture–This measure of manufacturing activity is derived by subtracting the cost of materials, supplies, containers, fuel, purchased electricity, and contract work from the value of shipments for products manufactured plus receipts for services rendered. The result of this calculation is then adjusted by the addition of value added by merchandising operations (that is, the difference between the sales value and cost of merchandise sold without further manufacturing, processing, or assembly) plus the net change in finished goods and work-in-process inventories between the beginning and end of the year.

For those industries where value of production is collected instead of value of shipments (see footnote in table 1), value added is adjusted only for the change in work-in-process inventories between the beginning and end of the year. For those industries where value of work done is collected, the value added does not include an adjustment for the change in finished goods or work-in-process inventories.

Value added avoids the duplication in the figure for value of shipments which results from the use of products of some establishments as materials by others. Value

added is considered to be the best value measure available for comparing the relative economic importance of manufacturing among industries and geographic areas.

Expenditures for new plant and equipment–Establishments in operation and any known plants under construction were asked to report their expenditures for (a) permanent additions and major alterations to manufacturing establishments and (b) new machinery and equipment used for replacement and additions to plant capacity if they are of the type for which depreciation accounts are ordinarily maintained.

These totals exclude expenditures for used plant and equipment, expenditures for land, and cost of maintenance and repairs charged as current operating expenses. Data for used plant and equipment will be published in the final industry bulletin.

End-of-year inventories–Comprised of (a) finished products; (b) work-in-process; and (c) materials, supplies, fuels, etc. Beginning in 1982, respondents were asked to report their inventories at (the lower of) cost or market prior to adjustment to LIFO cost. This is a change from prior years in which respondents were permitted to value their inventories using any generally accepted accounting method. Therefore, 1982 through 1987 data for inventories are not strictly comparable to prior-year data.

Specialization and coverage ratios–An establishment is classified in a particular industry if its shipments of primary products of the industry exceed in value its shipments of the products of any other single industry. An establishments' shipments include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), and receipts for miscellaneous activities (merchandising, contract work, resales, etc.). The following ratios have been developed to measure the relationship of primary product shipments to the data on shipments for the industry shown in table 1 and data on product shipments shown in table 2.

Specialization ratio–Represents the ratio of primary product shipments to total product shipments (primary and secondary, excluding miscellaneous receipts) for the establishments classified in the industry.

Coverage ratio–Represents the ratio of primary products shipped by the establishments classified in the industry to the total shipments of such products that are shipped by all manufacturing establishments, wherever classified.

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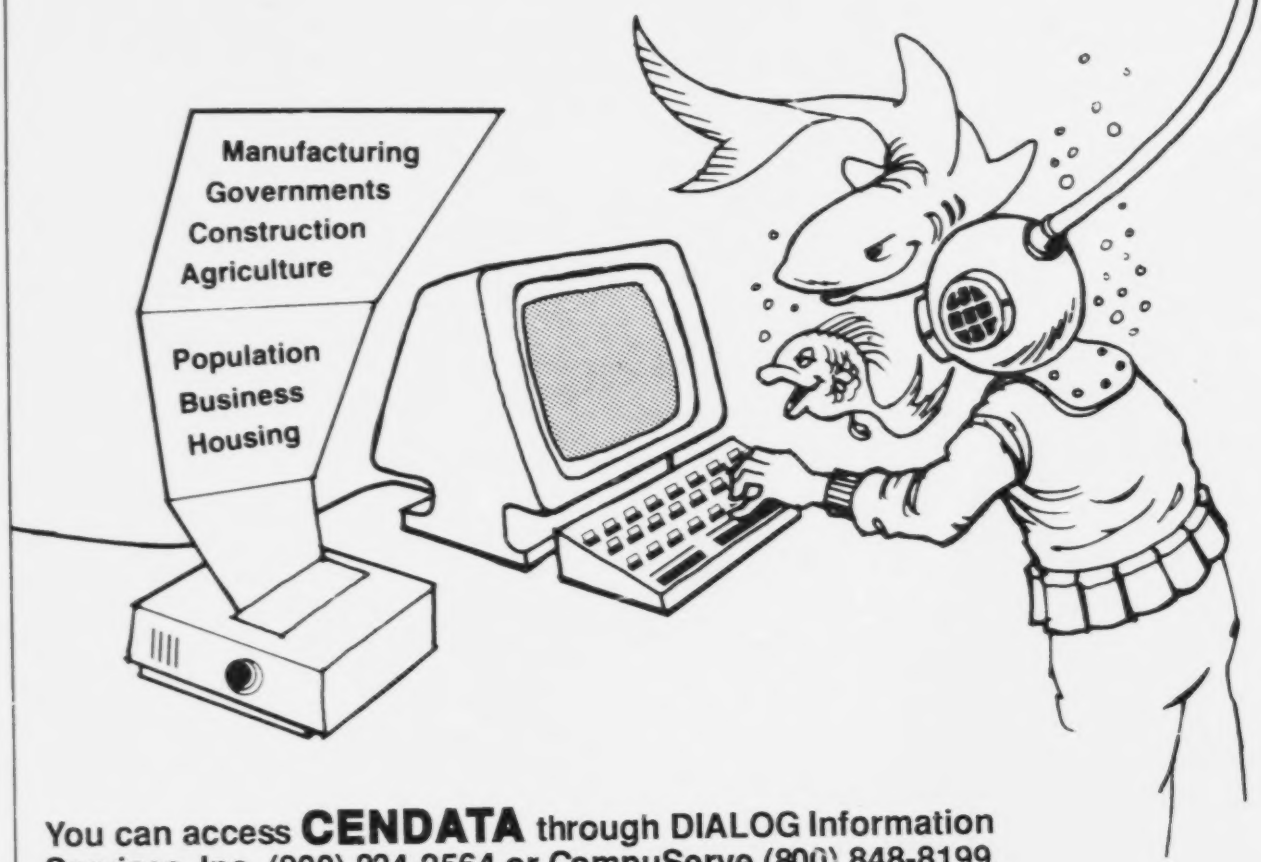

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